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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 09/678,582 | 10/03/2000 | Jan Bares | XER 2 0345 D/96418 | 5605 |

7590 07/01/2004
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EXAMINER

STEPHANY, TIMOTHY J

| ART UNIT | PAPER NUMBER |
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2622

DATE MAILED: 07/01/2004

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/678,582

Applicant(s)

BARES ET AL.

Examiner

Timothy J. Stephany

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 October 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7, 9-14, 16, 18 and 19 is/are rejected.
- 7) ☒ Claim(s) 8, 15 and 17 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date: _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Allowable Subject Matter

Claims 8, 15, and 17 are potentially allowable over the prior art, which does not describe, disclose, nor suggest the contents therein.

Claims are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all the limitations of the base claim and any intervening claims.

Drawings

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: **22** (page 4, line 15) is not shown in Figure 2. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: **60** and **62** are not shown in any of the figures. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

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Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-4, 6, 9, 14, and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Steinkirchner ('365) in view of Buchanan ('653).

Regarding **claims 1, 2, 9 and 16**, Steinkirchner discloses an apparatus (and thus a system and method) whereby a group of pixels are input according to a color identifier ("saturation of the chrominance") and that an average color identifier is determined ("average of a small area of pixels") which then is used to classify a pixel as either neutral or color (non-neutral) (col. 5, lines 51-55).

Steinkirchner does not disclose expressly that there is a memory and that memory stores data in a raster format.

Buchanan discloses that there is a memory that receives image data in raster format (col. 1, lines 42-45).

Steinkirchner & Buchanan are combinable because they are from the same field of endeavor and thus constitute analogous art, being that of color digital image processing.

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At the time of the invention, it would have been obvious to a person of ordinary skill in the art to use a memory to identify pixels as either neutral or non-neutral by comparing the value of an average of pixel values to the value of an individual pixel.

The suggestion/motivation for doing so would have been that the addition of a memory and specifically a raster memory is one that could be made under a variety of circumstances involved in any data processing and thus has broad application.

Therefore, it would have been obvious to combine Steinkirchner & Buchanan to obtain the invention as specified in claims 1, 2, 9 and 16.

Regarding **claims 3 and 14**, Steinkirchner and Buchanan disclose an apparatus (and thus a system and method) in the claim 1 rejection above. Steinkirchner adds that the distinction between neutral and non-neutral is made with a threshold (col. 5, lines 54-55).

Regarding **claim 4**, Steinkirchner and Buchanan disclose an apparatus (and thus a system and method) in the claim 1 rejection above. Steinkirchner has been compared to a threshold, that distinguishes a pixel as being neutral or non-neutral. The designation of neutral includes any (one) of the values of neutral within the range along the axis of neutral values (plurality).

Regarding **claim 6**, Steinkirchner and Buchanan disclose an apparatus (and thus a system and method) in the claim 1 rejection above. Steinkirchner adds that there is an output of the neutral pixels (col. 5, lines 28-29).

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Claims 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Steinkirchner ('365) in view of Buchanan ('653), further in view of Schweid ('291).

Steinkirchner and Buchanan disclose an apparatus (and thus a system and method) in the claim 1 rejection above.

Steinkirchner and Buchanan does not disclose expressly that the pixel classified as neutral is rendered as one of a plurality of neutral colors and that the one classified as non-neutral is rendered with one of a plurality of non-neutral colors.

Schweid discloses that the values on one side of a threshold are printed among a number of neutrals and that on the other side are printed from a number of colors (col. 2, lines 60-63 and Figure 1).

Steinkirchner, Buchanan & Schweid are combinable because they are from the same field of endeavor and thus constitute analogous art, being that of color digital image processing.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to render a neutral pixel with a neutral color and a non-neutral pixel with neutral and non-neutral colors.

The suggestion/motivation for doing so would have been that standard four color printing will often render neutral pixels with neutral ink, typically K (black), and non-neutral pixels with color and neutral, CMYK, inks.

Therefore, it would have been obvious to combine Steinkirchner, Buchanan & Schweid to obtain the invention as specified in claim 5.

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Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Steinkirchner ('365) in view of Buchanan ('653), further in view of Katayama ('579).

Steinkirchner discloses an apparatus (and thus a system and method) in the claim 6 rejection above.

Steinkirchner does not disclose expressly that for each pixel in a group, the color that is the average of those colors within the group is the one printed.

Katayama discloses that the pixels within a group are printed as the average of the values within the group and that this is applied to a printer system (col. 14, lines 42-43).

Steinkirchner, Buchanan & Katayama are combinable because they are from the same field of endeavor and thus constitute analogous art, being that of color digital image processing.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to print a color that is the average of the colors within a group of pixels for a given pixel.

The suggestion/motivation for doing so would have been that the use of pixel replacement from a group of surrounding pixels is applied in cases between Steinkirchner and Katayama when the purpose is a form of distinction and substitution of pixels, in the first case between neutral and colors and in the second case to separate out color characters.

Therefore, it would have been obvious to combine Steinkirchner, Buchanan & Katayama to obtain the invention as specified in claim 7.

Claims 10 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Steinkirchner ('365) in view of Buchanan ('653), further in view of Schweid ('291).

Steinkirchner and Buchanan disclose an apparatus (and thus a system and method) in the claim 9 rejection above.

Steinkirchner and Buchanan does not disclose expressly that the pixel classified as neutral is rendered with neutral colorant and that the one classified as non-neutral is rendered with non-neutral and neutral colorants.

Schweid discloses that the values on one side of a threshold are printed among a number of neutrals and that on the other side are printed from a number of colors (col. 2, lines 60-63 and Figure 1) and that this uses Lab space (col. 3, line 1) that is directly mathematically convertible to $L^*C^*h^*$.

Steinkirchner, Buchanan & Schweid are combinable because they are from the same field of endeavor and thus constitute analogous art, being that of color digital image processing.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to print a neutral pixel with a neutral colorant and a non-neutral pixel with neutral and non-neutral colorants.

The suggestion/motivation for doing so would have been that standard four color printing will often render neutral pixels with neutral ink, typically K (black), and non-neutral pixels with color and neutral, CMYK, inks. Also, that the use of color conversions between color spaces and specifically transformations between a^*b^* and

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C*h* would be known and applicable to any circumstance that was using such color space measures without any ado.

Therefore, it would have been obvious to combine Steinkirchner, Buchanan & Schweid to obtain the invention as specified in claims 10 and 11.

Claims 12 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Steinkirchner ('365) in view of Buchanan ('653), further in view of Katayama ('579).

Steinkirchner and Buchanan disclose an apparatus (and thus a system and method) in the claim 9 rejection above.

Steinkirchner and Buchanan do not disclose expressly that there is an output device for rendering data, and that this is a color-printing device.

Katayama discloses that the color selection is applied to a color printer system (col. 14, lines 42-43).

Steinkirchner, Buchanan & Katayama are combinable because they are from the same field of endeavor and thus constitute analogous art, being that of color digital image processing.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to apply a color technique to be sent to an output device or a color printer.

The suggestion/motivation for doing so would have been that the intent of the color manipulations or transformations imply a use and therefore necessitate an output. Any of these could be sent to a color output device of which a printer is common and accessible.

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Therefore, it would have been obvious to combine Steinkirchner, Buchanan & Katayama to obtain the invention as specified in claims 12 and 13.

Claims 18 and 19 rejected under 35 U.S.C. 103(a) as being unpatentable over Steinkirchner ('365) in view of Buchanan ('653), further in view of Schweid ('291).

Steinkirchner and Buchanan disclose an apparatus (and thus a system and method) in the claim 16 rejection above.

Steinkirchner and Buchanan does not disclose expressly that the pixel classified as neutral is rendered with neutral colorant and that the one classified as non-neutral is rendered with non-neutral and neutral colorants.

Schweid discloses that the values on one side of a threshold are printed among a number of neutrals and that on the other side are printed from a number of colors (col. 2, lines 60-63 and Figure 1).

Steinkirchner, Buchanan & Schweid are combinable because they are from the same field of endeavor and thus constitute analogous art, being that of color digital image processing.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to print a neutral pixel with a neutral colorant and a non-neutral pixel with neutral and non-neutral colorants.

The suggestion/motivation for doing so would have been that standard four color printing will often render neutral pixels with neutral ink, typically K (black), and non-neutral pixels with color and neutral, CMYK, inks and that the output is printed.

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Therefore, it would have been obvious to combine Steinkirchner, Buchanan & Schweid to obtain the invention as specified in claims 18 and 19.

Additional Notes

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Winkelman ('890), Ancin ('468), Karidi ('122), Kanata ('202), Horie ('624) and Ho (US 2003/0179911 A1) deal with component/region detection or separation; Fan ('592), Murai ('904), Handley (US 2003/0206307 A1) and Nakano (JP 03040078 A) refer to neutral/color distinction.


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Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Timothy J. Stephany whose telephone number is 703-305-8951. The examiner can normally be reached on 8:30 am - 4:30 pm ET.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Coles can be reached on 703-305-4712. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


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